REFERENCE CASE MARITIME

Weld Inspection Services for Shipping Company

As a Danish shipping company required accurate and flexible inspection services for one of their ships, the ship owner was looking for a reliable and independent partner with expertise in advanced non-destructive inspection techniques. This is why they turned to TÜV Rheinland.

Basic Facts	
Client	Ship owner in Denmark
Timeframe	2013
Project location	Romania and China
Main services	▪ Advanced non-destructive testing (NDT) services ▪ Weld inspection
Involved regulations/standards	Japanese Industrial Standard

Initial situation and requirements

In 2013 a Danish shipping company required reliable inspection of their ship's hull welds. Insurance required the ship inspection and outcomes to be provided on the basis of the Japanese Industrial Standard. The Danish ship owner entrusted TÜV Rheinland with this project as a reliable, neutral and independent provider of NDT services.

Because the ship was in operation and could not afford downtimes, our experts had a very short timeframe for providing the required services. The inspection had to be completed during the ship's unloading and reloading, and the preliminary results were to be sent as soon as possible to the ship owner. Using the requested conventional technique would have been more time-consuming and less efficient. Therefore we suggested using the advanced NDT inspection technique Time of Flight Diffraction (TOFD).

Solutions, results

Time of Flight Diffraction (TOFD) is a high performance non-destructive testing method used for the inspection of welds based on ultrasonic technique. It offers accurate detection of weld defects and is repeatable and recordable. This is why we chose this advanced non-destructive method to test the welds on the ship. Moreover, by using this technique, only one team was required to conduct the inspection services within the required timeframe.

The TOFD method offers very accurate inspection results. Previously, ship inspections were only conducted when the ships were in dry-docks. Thanks to advanced NDT techniques, our experts could conduct the inspection in service. Upon completion of the weld inspection, the ship owner received preliminary results directly. He was also provided with the digital recording of the inspection, which he could further use for discussion with the insurance companies.

Satisfied by the services offered by TÜV Rheinland in Romania and expecting to leverage our company's global network, the ship owner later awarded us similar inspection service contracts around the world.

Did you know?

If further analysis is required on inspection data, our in-house developed custom analysis software ScanPlan®, is available.

Benefits for the client

TÜV Rheinland provided the shipping company with:

- Reliable inspection data, repeatable and recordable inspection results.
- A cost- and time-saving solution through in service inspection.
- Accurate detection of weld defects.

About TÜV Rheinland:

TÜV Rheinland is a global leader in independent inspection services, founded more than 140 years ago. The group maintains a presence in 65 countries with 18,000 employees; annual turnover is more than EUR 1.6 billion. The independent experts stand for quality, efficiency and safety for people, technology and the environment in nearly all aspects of life.

TÜV Rheinland inspects technical equipment, products and services, oversees projects and helps to shape processes for companies. Its experts train people in a wide range of careers and industries. To this end, TÜV Rheinland employs a global network of approved labs, testing and education centres. Since 2006, TÜV Rheinland has been a member of the United Nations Global Compact to promote sustainability and combat corruption.

We have many years' worth of experience in conventional and advanced non-destructive testing methods, enabling us to respond to the needs of industry and quickly provide answers to the inspection challenges that arise. Our specialized applications will help clients to enhance inspection quality, simplify processes, facilitate inspection setups and realize easier interpretation.

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